Version with Markings to Show Changes Made

Applicant : Yoshii et al.
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Title : BIOCHIP AND METHOD FOR USING THE SAME

Art Unit : 1643
Examiner : Arden Marschel, Ph.D.

In The Specification:

The following paragraph has been added on page one after the title:

--The present application is a 35 USC §371 of PCT/JP99/04459, filed on August 19, 1999, which claims the benefit of priority of Japan patent application no. 255288/1998, filed September 09, 1998. These applications are explicitly incorporated herein by reference in their entirety and for all purposes.--

In The Claims:

Claim 1 has been amended as follows:

1. (Amended) A biochip comprising:

(a) a surface [to be] capable of being spotted with a plurality of biopolymers in a predetermined pattern, and

(b) a storage medium for storing information of the biopolymers to be spotted.

Claim 5 has been amended as follows:

5. (Amended) The [A] biochip [according to any one] of [claims 1-4] claim 1 or claim 2, wherein the storage medium [is] comprises a semiconductor memory which can read/write information in a non-contact state.

Claim 6 has been amended as follows:

6. (Amended) The [A] biochip [according to any one] of [claims 1-5] claim 1 or claim 2, wherein the storage medium stores information of [the] spot locations on the biochip surface in relation to information of the type of biopolymers spotted on [the] each spot locations.

Claim 7 has been amended as follows:

7. (Amended) A method for using a biochip, wherein a plurality of biopolymers are spotted on a surface of the biochip in a predetermined pattern, the biochip comprising [being provided with] a storage medium; and [wherein] information of the spot locations are written to the storage medium in relation to information of the type of biopolymers spotted on [the] each spot location.

Claim 8 has been amended as follows:

8. (Amended) A method for using a biochip, comprising the steps of:

(a) applying a sample to the biochip, [whose] wherein the biochip comprises a surface [is] spotted with a plurality of biopolymers in a predetermined pattern; and

(b) detecting a spot location where the sample has [hybridized] bound;

wherein the biochip [is provided with] comprises a storage medium that stores information of the spot locations in relation to information of biopolymers spotted on the spot locations, and [wherein]

(c) storing and displaying information of the biopolymer that has [hybridized] bound with [the] a sample molecule by searching [is searched] in the data stored in the storage medium based on the [hybridized] spot location bound with a sample molecule [and is displayed].

The following new claims have been added:

9. (NEW) The biochip of claim 1 or claim 2, wherein the information of the spotted biopolymers stored in the storage medium comprises the location, the type or the amount of biopolymer on each spot.

10. (NEW) The biochip of claim 1 or claim 2, wherein the storage medium further comprises a covered surface.

11. (NEW) The biochip of claim 10, wherein the covered surface comprises a plastic or a glass.

12. (NEW) The biochip of claim 10, wherein the covered surface protects the storage medium from exposure to a solution.

13. (NEW) The biochip of claim 10, further comprising a semiconductor memory support.

14. (NEW) The biochip of claim 13, wherein the semiconductor memory support comprises a silicon wafer.

15. (NEW) The biochip of claim 13, wherein the semiconductor memory support is covered.

16. (NEW) The biochip of claim 15, wherein the semiconductor memory support is covered with a resin.

17. (NEW) The biochip of claim 13, wherein the semiconductor memory support is the surface spotted with the biopolymer.

18. (NEW) The biochip of claim 1 or claim 2, wherein the biopolymer comprises a DNA molecule.

19. (NEW) The biochip of claim 1 or claim 2, wherein the biopolymer comprises a protein molecule.

20. (NEW) The method of claim 7, wherein the storage medium further stores information of the amount of biopolymers spotted on each spot location.

21. (NEW) The method of claim 7 or claim 8, wherein the biopolymer comprises a DNA molecule.

22. (NEW) The method of claim 7 or claim 8, wherein the biopolymer comprises a protein molecule.